

**QUARTERLY REPORT
CONCERNING
MTBE USE IN
CALIFORNIA GASOLINE**
October 1 through December 31, 2003

STAFF REPORT

February 2004
P 300-03-001V4



Arnold Schwarzenegger, Governor

CALIFORNIA ENERGY COMMISSION

Michael Nyberg,
Jeff Poteet,
Principal Authors

Daryl Metz,
Project Manager

Pat Perez,
Manager
Transportation Fuels Office

Charles Mizutani,
Acting Deputy Director
Transportation Energy Division

Robert L. Therikelsen,
Executive Director

Quarterly Report Concerning MTBE Use in California Gasoline

October 1 through December 31, 2003

Background

Health and Safety Code Section 43024 requires the California Energy Commission to prepare a quarterly report on the amount of methyl tertiary butyl ether (MTBE) used in California gasoline. This report summarizes the amount of MTBE each refinery in California used during the previous quarter — October 1 through December 31, 2003.

The amount of MTBE reported in this document is the quantity used at each refinery in the production of California Reformulated Gasoline (CaRFG) for sale in the state. The numbers do not include MTBE used in the production of any type of gasoline intended for sale outside the state. Several small refineries operating in the state are not included in this report because they do not produce gasoline.

MTBE, a compound containing oxygen, is an oxygenate used to produce gasoline in California. California refiners also use two other oxygenates, ethanol and tertiary amyl methyl ether. Federal law requires California refiners to use a minimum amount of oxygen in all reformulated gasoline sold in severe and extreme ozone non-attainment regions of the state. Gasoline used in non-attainment areas in Southern California, the Sacramento Metropolitan Area, and the San Joaquin Valley account for over 80 percent of all gasoline used in the state.

On March 15, 2002, Governor Gray Davis issued Executive Order D-52-02. The Order allowed California refineries up to 12 additional months for the transition from MTBE to ethanol in the production of gasoline. As of December 31, 2003, California refiners have successfully phased out the use of MTBE. Ethanol is now used as the primary oxygenate in those areas requiring an oxygenate additive under Federal law.

California refineries no longer blend MTBE into gasoline as of January 1, 2004. Thus, there is no further need to collect data on MTBE use in California gasoline.

Fourth Quarter 2003 Results

California refiners used over one million barrels of MTBE to make CaRFG during the fourth quarter of 2003. This amount represents approximately 11,500 barrels or 483,000 gallons of MTBE per day. Table 1 shows MTBE use and total CaRFG production by each refinery in California. The total volume of MTBE used decreased by 74 percent compared to the third quarter of 2003. CaRFG production increased from 91.2 million barrels to 91.3 million barrels. The reduction in MTBE use combined with the slight increase in CaRFG production helped to reduce the average concentration of MTBE to 1.1 percent from 4.4 percent.

Figure 1 illustrates the average concentration of MTBE used in California's gasoline from the first quarter of 2000 through the fourth quarter of 2003. As expected, refiners have reduced MTBE use in the production of CaRFG to zero as of January 1, 2004. California refiners may continue, however, to use MTBE in the production of gasoline that is exported to markets outside of California.

Figure 2 compares the average quarterly spot prices of CaRFG and MTBE in Los Angeles. As of January 1, 2004, the relative prices of gasoline and MTBE have become irrelevant to California refiners since gasoline sold within the state no longer contains MTBE.

Table 1
California MTBE Use by Refinery Location

Refiner	California Location	MTBE Use 4th Qtr – 2003 (Thousands of Barrels)	MTBE Use 3rd Qtr – 2003 (Thousands of Barrels)	Change From Previous Quarter (Percent)
BP ³	Carson	0	0	0%
ChevronTexaco ⁴	El Segundo	0.3	1	-70.0%
ChevronTexaco ⁵	Richmond	204.4	815	-74.9%
ExxonMobil ⁶	Torrance	0	0	0%
Kern Oil	Bakersfield	0	0	0%
ConocoPhillips ⁷	Los Angeles	0	0	0%
ConocoPhillips ⁸	Rodeo	0	0	0%
Shell ⁹	Bakersfield	0	0	0%
Shell ¹⁰	Los Angeles	0	0	0%
Shell ¹¹	Martinez	0	0	0%
Tesoro ¹²	Avon	179.1	791	-77.4%
Valero ¹³	Wilmington	301.0	1,196	-74.8%
Valero ¹⁴	Benicia	358.0	1,196	-70.1%
State Refinery MTBE Totals		1,042.8	3,999	-73.9%
State CaRFG Production		91,341	91,166	0.19%
Statewide Average MTBE Content		1.1%	4.4%	-3. 3%

Source: California Energy Commission form number Q1001

Figure 1
California Gasoline
MTBE Concentration

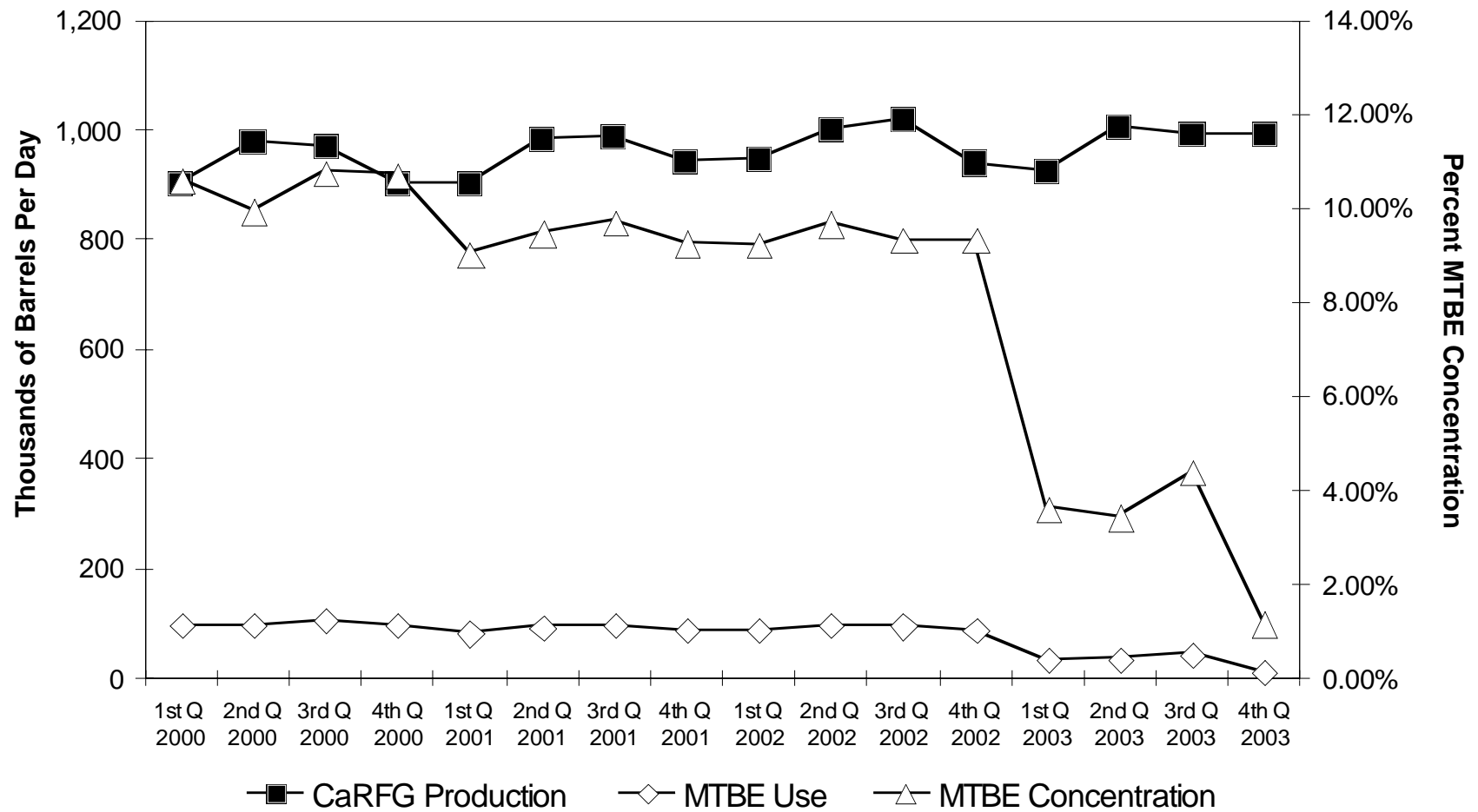
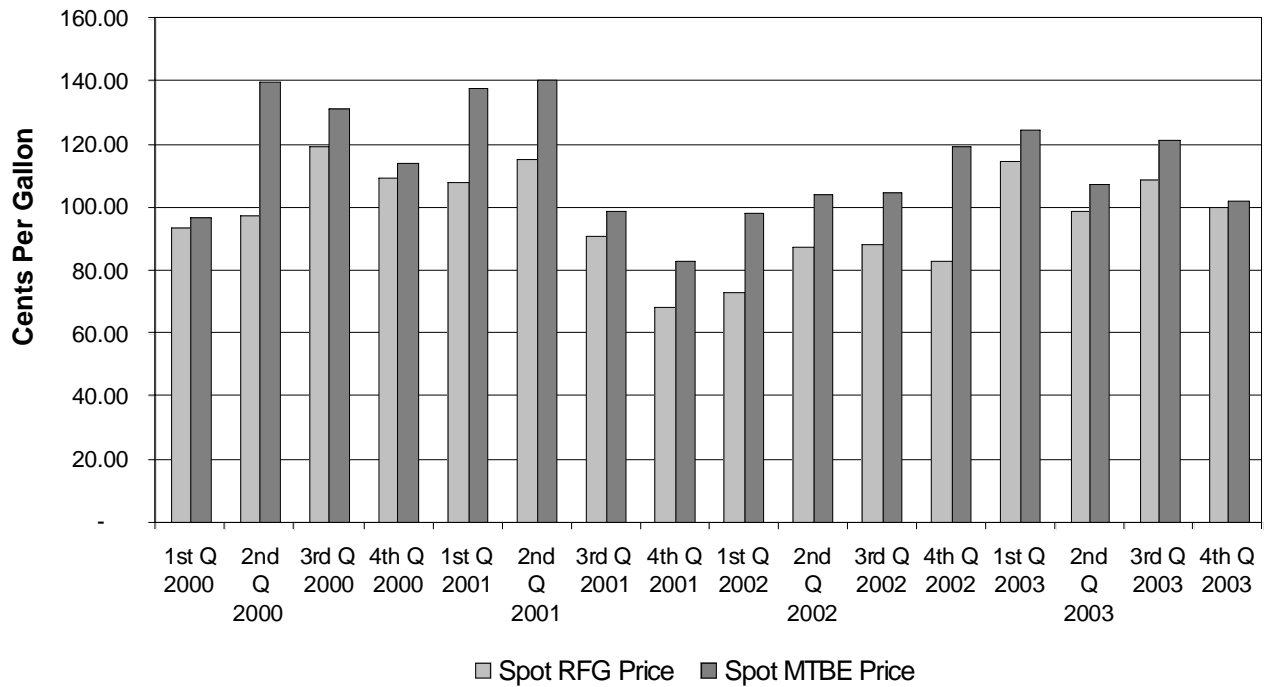


Figure 2
CaRFG vs. MTBE Spot Prices
Los Angeles



Source: California Energy Commission derived averages from the Oil Price Information Service Daily West Coast Spot Market Report and the Oxy-Fuel News Weekly Price Report.

End Notes

¹ A barrel is equivalent to 42 U.S. gallons.

² The Tosco Corporation was acquired by Phillip Petroleum Co. on September 19, 2001. Phillips Petroleum merged with Conoco Inc. 8/30/02 to form ConocoPhillips.

³ BP Amoco merged with ARCO to form BP 4/18/00. Prior to the merger, this refinery was known as the ARCO – Carson refinery.

⁴ Chevron merged with Texaco to form ChevronTexaco 9/30/01. Prior to the merger, this refinery was known as the Chevron – El Segundo refinery.

⁵ Chevron merged with Texaco to form ChevronTexaco 9/30/01. Prior to the merger, this refinery was known as the Chevron – Richmond refinery

⁶ Exxon and Mobil merged 7/2000 to become ExxonMobil. This refinery was known as the Mobil Torrance refinery prior to the merger.

⁷ Phillips Petroleum Co. merged with Conoco Inc. 8/30/02 to form ConocoPhillips. Phillips Petroleum Co. previously acquired the Tosco Corp. 9/2001. This refinery was known as the Tosco – Los Angeles refinery prior to that purchase.

⁸ Phillips Petroleum Co. merged with Conoco Inc. 8/30/02 to form ConocoPhillips. Phillips Petroleum Co. previously acquired the Tosco Corp. 9/2001. This refinery was known as the Tosco – Rodeo refinery prior to that purchase.

⁹ Shell Oil Products acquired this refinery along with all of Equilon's western US refineries 3/2002. Equilon was a joint venture formed by Texaco and Shell 4/2000. Prior to the Equilon joint venture, the refinery was operated solely by Texaco and known as the Texaco – Bakersfield refinery.

⁸ Shell Oil Product acquired this refinery along with all of Equilon's western US refineries 3/2002. Equilon was a joint venture formed by Texaco and Shell 4/2000. Prior to the Equilon joint venture, the refinery was operated solely by Texaco and known as the Texaco – Los Angeles.

¹¹ Shell Oil Products acquired this refinery along with all of Equilon's western US refineries 3/2002. Equilon was a joint venture formed by Texaco and Shell 4/2000. Prior to the Equilon joint venture, the refinery was operated solely by Shell and known as the Shell – Martinez refinery.

¹² Tesoro Petroleum completed its purchase of this refinery from Valero on 05/17/02. Valero merged with Ultramar Diamond Shamrock (UDS) 12/2001. This refinery was known as the UDS– Avon or Golden Eagle refinery prior to the merger. UDS operated the refinery independently prior to the sale to Tesoro Petroleum.

¹³ Valero merged with Ultramar Diamond Shamrock (UDS) 12/2001. This refinery was known as the UDS- Wilmington refinery prior to the merger.

¹⁴ Valero purchased this refinery from ExxonMobil 5/2000. The refinery was known as the ExxonMobil – Benicia refinery prior to the purchase.